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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/585,036	05/04/2007	Anders Umegard	800738-0009	6187

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EXAMINER

CLERKLEY, DANIELLE A

ART UNIT	PAPER NUMBER
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3643

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/585,036	Applicant(s) UMEGARD ET AL.	
	Examiner DANIELLE CLERKLEY	Art Unit 3643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,6-10,12,13 and 15-22 is/are pending in the application.
- 4a) Of the above claim(s) 10,12,13,15-19 and 22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6-9,20 and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>9/2/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Claims 10, 12, 13, 15-19 and 22 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 1/12/2010.

2. Applicant's election with traverse of Group I in the reply filed on 1/12/2010 is acknowledged. The traversal is on the ground(s) that the use of a plurality of milk collectors and a milk meter "are at least implicit in the method claims". This is not found persuasive because although claims 1 and 21 recite the steps of "measuring the total milk flow, generating data, and analyzing the data to detect an abnormal milk flow from one teat indicated by a predetermined departure from a predicted relationship between the milk flow rate and the time from commencement of milking", the method fails to recite a particular machine or device to perform such steps. Therefore, although it may not be the most preferred method of milking, the method as claimed can be practiced by hand. It is old and notoriously well-known that the teats of a milking animal can be milked by hand and one is capable of measuring, recording, generating and analyzing data using pencil and paper. The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1, 3, 4, 6-9, 20 and 21 are rejected under 35 USC 101 as being directed to non-statutory subject matter because these are method or process claims that do not transform underlying subject matter (such as an article or materials) to a different state or thing, nor are they tied to another statutory class (such as a particular machine). See *Diamond v. Diehr*, 450 U.S. 175, 184 (1981) (quoting *Benson*, 409 U.S. at 70); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978) (citing *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876)). See also *In re Bilski* (Fed Cir, 2007-1130, 10/30/2008) where the Fed. Cir. held that method claims must pass the "machine-or-transformation test" in order to be eligible for patent protection under 35 USC 101.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 3, 8, 9 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Loosveld (EP 0657098 A1), as listed in applicant's Information Disclosure Statement.

Art Unit: 3643

7. In re claim 1, Loosveld discloses a method of milking animals comprising measuring the total milk flow from all the teats of the udder of an animal being milked (Col. 4, lines 19-23) and generating data representative of the measured total milk flow rate (Col. 4, lines 23-26), analyzing the data to detect an abnormal milk flow from one teat indicated by a predetermined departure from a predicted relationship between the milk flow rate and the time from commencement of milking (Col. 5, lines 2-36), and selecting the animal for medical inspection in the event that such a departure is detected (Col. 5, lines 33-39), wherein the data is analyzed to detect a departure from a predicted stepped reduction in the milk flow rate towards the end of the milking procedure for the animal (Col. 1, lines 15-25: deviations in milk flow rates from predetermined values measured between the milk flow period).

8. In re claim 21, Loosveld discloses a method of milking animals comprising measuring the total milk flow from all the teats of the udder of an animal being milked (Col. 4, lines 19-23) and generating data representative of the measured total milk flow rate (Col. 4, lines 23-26), analyzing the data to detect an abnormal milk flow from one teat indicated by a predetermined departure from a predicted relationship between the milk flow rate and the time from commencement of milking (Col. 5, lines 2-36), and selecting the animal for medical inspection in the event that such a departure is detected (Col. 5, lines 33-39), wherein the analysis includes determining a peak flow rate at which the flow rate remains substantially level for a major part of the animal

Art Unit: 3643

milking procedure, and determining the duration of the milk flow at the peak flow rate and the duration of the flow rate at the peak flow rate (Col. 5, lines 14-18).

9. In re claim 3, Loosveld discloses the analysis comprises calculations (Col. 5, lines 23-27: processing unit 23 uses statistical techniques to determine deviations) of the rate of change in the reducing milk flow rate in order to determine step changes in the milk flow rate (Col. 5, lines 33-36).

10. In re claim 8, Loosveld discloses the milk flows from the respective teats are brought together (Col. 4, lines 21-23: milk cluster 26) and the total milk flow is measured in a single milk meter (sensor 27 of cluster 26).

11. In re claim 9, Loosveld discloses the predicted relationship between the milk flow rate (Col. 5, lines 11-13) and the time from commencement of milking (Col. 5, lines 8-10: milk flow period, beginning of milk flow) for an animal is derived from data collected during one or more previous milkings of the same animal (Col. 1, line 8 and lines 52-56: data is measured and stored, thus enabling the user to refer to historical data for convenient use).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Loosveld (EP 0657098 A1) in view of Sjolund et al. (U.S. Patent No. 6,830,008).

14. In re claim 4, Loosveld discloses the invention as discussed above, but fails to specifically disclose four step reduction changes corresponding to the milk flow from the respective teats falling at the end of milking. However, Sjolund et al. teaches a method of milking animals comprising the predicted stepped reduction in the milk flow rate includes four step reduction changes corresponding to the milk flow from the respective teats falling at the end of milking (as shown in Figs. 1a-1d). It would have been obvious to one having ordinary skill in the art at the time of the invention to have modified the milking method of Loosveld to include analysis of each udder quarter as taught by Sjolund et al. to selectively monitor the milk flow, in particular, the health of each individual udder quarter for efficient identification of an unhealthy milking animal.

15. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Loosveld (EP 0657098 A1) in view of Wakui et al. (U.S. Patent No. 5,152,246).

16. In re claim 6, Loosveld discloses the invention as discussed above, but fails to specifically disclose a ratio of the peak flow duration to the peak flow rate is calculated. However, Wakui et al. teaches a method of milking animals includes a ratio of the peak flow duration to the peak flow rate is calculated (as shown in graph of Fig. 2b and discussion Col. 4, line 62 through Col. 5, lines 1-15). It would have been obvious to one having ordinary skill in the art at the time of the invention to have modified the milking method of Loosveld to include data analysis as taught by Wakui et al. to selectively

Art Unit: 3643

monitoring the milking animal, and possibly discontinue milking procedures, when the calculated ratio value departs from a predicted value.

17. In re claim 7, Loosveld discloses the invention as discussed above, including comparing predetermined milk flow characteristic values with deviations in the measured data and further signaling the milking animal when the deviations exceed the predetermined values (Loosveld abstract) but fails to specifically disclose comparing the peak flow rate and the duration of the peak flow rate. However, Wakui et al. teaches, in Fig. 8, comparing the peak flow rate (flow rate) and the duration of the peak flow rate (time) with predicted values (dashed line indicating the predicted flow rate), wherein the peak flow rate departs significantly from the predicted peak flow rate but the peak flow duration remains within acceptable limits of the peak flow rate duration (as discussed in Col. 1, lines 54-68). It would have been obvious to one having ordinary skill in the art to have modified the milking method of Loosveld to include data analysis as taught by Wakui et al. to selectively monitoring the milking animal, and possibly discontinue milking procedures when the peak flow rate departs from the predicted peak flow rate.

18. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Loosveld (EP 0657098 A1) in view of Mein (U.S. Patent No. 5,178,095).

19. In re claim 20, Loosveld discloses the invention as discussed above, including using a processing device (23) for measuring and storing statistical data of milking conditions, but fails to specifically disclose data such as milking vacuum levels, hormone stimulation, and/or time of teat cup detachment. However, Mein teaches it is

Art Unit: 3643

old and notoriously well-known to analyze milking conditions (as shown in Fig. 4), namely the milking vacuum level data for a subsequent milking of the animal, generated with the milk flow rate data during the milking of the same animal (Col. 5, lines 36-43). It would have been obvious to one having ordinary skill in the art at the time of the invention to have determined several milking conditions as taught by Mein based on the data generated by the method of Loosveld for the advantage of monitoring conditions on an animal-by-animal basis, by comparing data previously recorded.

Conclusion

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Mukarovsky et al. (U.S. 4,064,838), Tomizawa et al. (U.S. 4,922,855), van den Berg (U.S. 5,704,311), van den Berg et al. (U.S. 5,568,788) and Brown et al. (U.S. 7,174,848).

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIELLE CLERKLEY whose telephone number is (571) 270-7611. The examiner can normally be reached on M-TH 8:00 AM - 5:00 PM EST, F 8:00 AM - 4:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Poon can be reached on (571) 272-6891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3643

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DANIELLE CLERKLEY/
Examiner, Art Unit 3643

/Kimberly S Smith/
Primary Examiner, Art Unit 3644